REMARKS

I. INTRODUCTION

Claims 21 and 23 have been amended to correct typographical errors.

The examiner requires restriction under 35 USC §§121 and 372, alleging that the defined groups lack unity of invention under PCT Rule 13.1. It is the examiner's argument that these groups lack unity of invention because each includes the subject matter of independent claim 11, which is allegedly anticipated by WO 95/10860 and JP 8-59981. Applicants provisionally elect Group I as defined by the examiner, traverse the restriction requirement, and request that the requirement be withdrawn.

II. APPLICABLE RULES FOR UNITY OF INVENTION

PCT Rule 13.1 provides the requirement that each international application shall have unity of invention. *See also* 37 CFR § 1.475 and MPEP § 1893.03(d). The circumstances in which unity of invention is to be considered fulfilled are explained in PCT Rule 13.2.

PCT Rule 13.2 provides that unity of invention is proper where a group of inventions share one or more of the same or corresponding special technical features, i.e., those technical features which define a contribution which each invention, considered as a whole, makes over the prior art. When an application, like the one at issue here, contains dependent claims, PCT Rule 13.4 is also applicable.

PCT Rule 13.4 provides that "[s]ubject to Rule 13.1, it shall be permitted to include in the same international application a reasonable number of dependent claims,

claiming specific forms of the invention claimed in an independent claim, even where the features of any dependent claim could be considered as constituting in themselves an invention." This rule is directly applicable to present application as the examiner himself concedes the claims of each defined group are dependent on independent claim 11 (page 2, lines 15-16 of the Office Action).

Annex B, Part 1(c) of the PCT provides instructions for determining the requisite unity of invention when an application contains dependent claims. The instructions detail a two-step inquiry. In the first step, one must determine if the independent claim avoids the prior art.

In the second step, one must ascertain the consequences of an independent claim avoiding or not avoiding the prior art. If an independent claim does "avoid the prior art and satisfy the requirement of unity of invention, no problem of lack of unity arises in respect of any claims that depend on the" independent claim. PCT Annex B, Part 1(c)(I). However, if "an independent claim does not avoid the prior art, then the question whether there is still an inventive link between all the claims dependent on that claim needs to be carefully considered." PCT Annex B, Part 1(c)(ii).

III. APPLICATION OF PCT RULES TO APPLICANTS' INVENTION

The examiner made two errors in applying the inquiry of PCT Annex B, Part 1(c). First, the examiner erred by taking only the first step of that two-step inquiry. Second, in applying the first step, the examiner erred by failing to consider contributions of the applicants' invention over the prior art.

A. Examiner Erred By Making A Partial Unity of Invention Inquiry

As explained above, PCT Annex B, Part 1(c) provides a two-step inquiry for determining unity of invention. The examiner only took the first step of that inquiry. Particularly, he made a determination that independent claim 11 does not avoid the prior art as it is allegedly anticipated by WO 95/10860 and JP 8-59981 (page 2, lines 16-17 of Office Action). But the examiner did not take the second step of the inquiry.

Contravening the instructions of PCT Annex B, Part 1(c)(ii), the examiner did not consider the importance of the fact that *despite* an alleged non-avoidance of the prior art that "there is still an inventive link between all the claims dependent on" independent claim 11. The examiner's articulation of the technical features actually concedes the unifying concept at the heart of the present claims ("Each invention includes the subject matter of claim 11," page 2, lines 15-16). Despite recognizing that inventive link, the examiner failed to give value to the inventive link in the unity of invention inquiry.

The value of each defined group depending on independent claim 11 is that each group (through its respective set of dependent claims) references a membrane comprising a composition including at least one polyurethane elastomer comprising at least one hard segment and at least one soft segment and a solid, wherein said solid is incorporated in said at least one polyurethane elastomer. Group I (claims 11 to 18 and 26 to 28) concerns that membrane and a method of its use. The membrane of group I can be used in composites (group II) and/or electrochemical cells (groups III and IV). As a consequence, all distinguishing features of the composites and/or electrochemical

cells are subject-matter of the claims of group I. Thus, all species, especially the species of groups II-IV, **have to** include the same or corresponding technical features of genus group I.

MPEP § 1893.03(d) instructs examiners to consider the examples in Annex B, Part 2 of the PCT. Example 13 (found at MPEP page AI-70) is analogous to the present situation:

> "Claim 1: Filament A for a lamp.
>
> Claim 2: Lamp B having filament A
>
> Claim 3: Searchlight provided with lamp B having filament A and a swivel arrangement C.
>
> Unity exists between claims 1, 2, and 3. The special technical feature common to all the claims is the filament A."

There are strong parallels between example 13 and applicants' invention. Applicants' claim 11 is analogous to claim 1 in the example in that both provide the core subject matter of all subsequent dependent claims. The set of dependent claims in applicants' group I is analogous to claim 2 in the example in that both define the primary product/method resulting from the independent claim. The sets of dependent claims in applicants' groups II-IV are analogous to claim 3 in the example in that both define secondary products containing the primary product resulting from the independent claim.

The aforementioned discussion shows that the examiner erred by failing to take the second step of the two-step inquiry of Annex B, Part 1© of the PCT. Such an error is extraordinary, especially given the fact that the examiner himself recognized the existence of an inventive link among applicants' claims but failed to understand the importance of that inventive link as being a *sine qua non* for the unity of invention inquiry. The consequence of this error is that it transforms the unity of invention requirement from a requirement of an inventive link to a requirement of an inventive link (codified in 35 USC §§ 121, 372) *plus* novelty (codified in 35 USC §102). The structure of the statutory scheme itself provides that the requirement of an inventive link and novelty be two separate inquiries.

Had the examiner taken the requisite second step, he would have realized that *despite* an alleged non-avoidance of the prior art by applicants' independent claim 11, there is an inventive link among the sets of dependent claims and the independent claim. The inventive link in applicants' invention is analogous to example 13 of Annex B, Part 2 of the PCT. Consequently, applicants' respectfully request that the examiner's restriction requirement be withdrawn.

B. The Examiner Erred in Concluding Applicants' Invention Does Not Avoid the Prior Art

The second error that the examiner committed is that he mistakenly concluded that the applicants' claim 11 does not avoid the prior art. Specifically, the examiner alleges that WO 95/10860 and JP 8-59981 anticipate the subject matter of independent claim 11, and thereby the defined groups do not make a contribution over the prior art

(page 2, lines 16-18 of the Office Action).

A prior art reference anticipates a claimed invention only if there is strict identity between the two. Specifically, to anticipate a claim, each and every element as set forth in the claim must be found, either expressly or inherently described, in a prior art reference. *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 2 USPQ2d 1051 (Fed. Cir. 1987) (cited at MPEP § 2131). An application of this general rule to the present facts shows that both prior art references do not anticipate independent claim 11. Rather, the present invention makes a contribution over both references because claim 11 contains elements not present in either reference.

1. Applicants' Claim 11

Independent claim 11 of the present application concerns

a membrane comprising a composition including

(a) 10 to 90 wt-% of at least one polyurethane elastomer comprising at least one hard segment and at least one soft segment, and

(b) 90 to 10 wt-% of a solid,

wherein said solid is incorporated in said at least polyurethane elastomer.

These membranes, which consist of specified polyurethane elastomers give a satisfactory Li transfer speed in battery applications at high current charge and discharge of ≥ 2.5 mA/cm^2 even though these membranes show very high Gurley values (i.e., very high air pass resistance), which means that the membranes according to the application have very few continuous micropores compared to current polyolefin

separators.

Membranes of this kind neither shrink nor melt even at temperatures above 200 °C. Consequently, this prevents short circuits due to shrinkage within a temperature range of 170 to 200 °C. Such short circuits might well occur when using polyolefin separators. Other advantages of said membranes are their suitability for being laminated on electrodes by heat and their good contact with the electrode surface when manufactured into round cells and prismatic cells by using a winding device.

2. Present Application Makes a Contribution Over WO 95/10860

WO 95/10860 discloses an electrochemical cell having a laminate consisting of a cathode and a membrane comprising, for example, an urethane or $LiPF_6$. In contrast to the present application, the membranes according to WO 95/10860 do not comprise a polyurethane elastomer with at least one hard segment and at least soft segment.

WO 95/10860 only mentions that the urethanes are generally formed by reaction of a mono- or diamine with a mono- or bischloroformate (page 12, lines 17 to 19 of WO 95/10860). On the other hand, the present application teaches use of a polyurethane elastomer with at least two thermoplastic, nonelastic polymer blocks having a melting temperature above 100 °C and an average molecular weight of 240 to 10,000 (hard segment) and between these thermoplastic, nonelastomeric polymer blocks an elastomeric block having a glass transition temperature below 10 °C, preferably below -10 °C, and an average molecular weight of about 240 to 100,000, preferably 1,000 to 10,000 (page 8, lines 14 to 19 of the present specification).

Therefore, the present invention provides a contribution over the prior art reference WO 95/10860 as it contains elements not anticipated by the reference.

3. Present Application Makes a Contribution Over JP 8-59981

The abstract of JP 8-59981 discloses a urethane-based elastomeric film. The composition claimed therein is obtained by blending a filler and a polyurethane-based resin composition comprising a thermoplastic polyurethane-resin with a soft segment consisting of a polyether and 5 to 25 wt-% of an ethylene-propylene-diene copolymer rubber. Thereby, the nature of the filler is not clear from JP 8-59981.

The membranes according to the present application include a solid which also can be a polymer. This polymer can be a polyethylene or polypropylene or a mixture of both, **but not** a polymer of these two monomers (page 5, lines 14 to 20 of the present specification) as proposed by JP 8-59981.

Therefore, the subject of the present application also provides a contribution over JP 8-59981 as it contains elements not anticipated by the reference.

IV. CONCLUSION

In view of the foregoing amendments and remarks, applicants respectfully request that the examiner withdraw the restriction requirement and continue with examination of all claims as filed. Applicants' also respectfully solicit passage of the application to issue.

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any excess fees to such deposit account.

Respectfully submitted,
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